

HAMATEUR CHATTER

The Milwaukee Radio Amateurs Club

April 2010, Volume 18, Issue 4

One of the World's Oldest Continuously Active Radio Amateur Clubs—since 1917

Presidents Letter

Busy. There is a lot going on in the club over the next few months. Our April meeting is a show and tell night with the members attending the meeting getting a chance to spend a few minutes talking about something, anything, ham radio related (however loosely). Anything you like. It can be a piece of equipment you enjoy... or despise. The format is open and any idea for a brief presentation is welcome. I hope this event will help the membership learn a few new things and reveal some hidden interests among the membership. Start thinking about what you want to show to the club. We hope to repeat this type of meeting later in the year.

We also have a bit of election business to take care of at the April meeting. It looks like at least two and maybe three of the officer positions are open without candidates at this time. Consider how important it is to fully staff all the officer positions to keep the club active and growing for the rest of the year. Now is a good time to get involved in the club. Many problems have been corrected in the last 8 months and we are poised to expand the amateur radio activities of the club. We have programs for meetings in place up to September and have good leads on programs for the last three meetings of the year. The momentum we have gained may easily be lost if we don't have enough interest from the membership at large to step up and lead the club for the next two years.

Speaking of stepping up, no one has expressed any interest in managing our Field Day this year. It is unthinkable this club would miss FD for the first time in history and it won't happen on my watch. Since we can't get someone to organize a traditional FD effort I'm going to recommend to the board we take a different approach to running FD this year. This new approach will not include the club taking care of equipment, food or anything else. Anyone interested in operating at FD is welcome but you will need to reserve a time slot, bring your own equipment and operate in the time requested.

Reservations will be first come first served. The number of HF positions we will operate will be determined based on interest. We will limit this number as the plan will be to run on emergency power again this year. The club does have two radios and a few antennas. Those that wish to operate the club equipment may setup a position using the club equipment with the understanding you will setup the equipment AND take it down AND properly store it where you found it; as you found it. A great deal of work was done last year to organize and inventory the club equipment, and keeping it organized is not optional. I will take on the duty of coordinating requests for operating times, bands and modes. If the club needs to provide some basic equipment or supplies, we'll consider spending as needed. This will be determined by the response and the activity involved. There will be no last minute panic requests so reserve operating time early. We will log using N3FJP software as this greatly reduces the work needed to submit the results. We may need to require some of those requesting a chance to operate to provide a logging computer. This will depend greatly on the response received to this way of running the MRAC FD. This new approach also allows for volunteers to work on earning some of the bonus points offered each year. Even if you choose not to operate you can contribute to the club score by working in advance of FD to put the bonus point on the table. Having said this, it is NOT too late for someone to step up and run a traditional FD. Without a volunteer the plan presented here will be pressed into action subject to the board approval. If we run FD with this new plan, I guess we'll find out who was more interested in the free food at FD than operating at FD! I need to recognize a few folks that have stepped up for MRAC.

The first kudos goes to Dave WB9BWP for a major update of the club history. The update has been posted on the club Yahoo Group and website (or should be by the time you read this). Dave puts a lot of work into this project. Please recognize his effort by taking a look at the new club history and tell him in person at a future meeting. Unfortunately, we get more feedback from random web surfers about our awesome club history than we do from members. Please make an effort to change the balance of the feedback. Dave also gets kudos for taking the lion's share of



MRAC Officers:

Terms Expiring in 2010

- President – Mark, AB9CD
- V-President-Brian, K9LCQ
- Secretary – Mike, KC9CMT
- Treasurer – Vacant
- Director – Dave, WB9BWP
- Director – Dave, KA9WXN

Terms Expiring in 2011

- Director – Al, KC9IJJ
- Director – Hal, KB9OZN
- Director – Dwain, KC9MJJ

The Club Phone Number is: (414) 332-MRAC or

(414) 332- 6 7 2 2

Visit our website at:

www.w9rh.org

Mail correspondence to:

M. R. A. C.

P.O. Box 240545

Milwaukee, WI 53223

staffing the club table at Superfest.

The other kudos goes to Michael KC9CMT. Michael took on the project to mail reminder letters to members that haven't paid dues this year. The result was a substantial number of renewals arriving in the club PO box. Thanks to Dave and Michael for their efforts and support of MRAC!

Kudos goes to the FM Simplex Committee. They have tallied the results for the 2010 contest and the results were announced at Superfest. They should be published elsewhere in this newsletter. Congratulations to those placing well in the contest. I understand certificates will be forthcoming. Congrats to the Badger Contesters for taking the club first place score. They will have their name added to the plaque displayed at AES one more time! I think MRAC needs to mount an effort to get back on the plaque again in 2011. Remember dues paid after the May 1st will include a \$3 late fee for a total of \$20. I suspect dues received in the PO Box the week before the May meeting might be accepted at the regular \$17 rate. We will strictly enforce the late fee at the May meeting and beyond. We are motivating members to pay before the election meeting to eliminate anything that delays starting the auction following the election.

The board also discussed how to handle dues for new members joining the club late in the year. The policy established for NEW members joining after our summer break (essentially September 1st) will pay dues for the next calendar year and be made members immediately. Previous members paying this late in the year are considered to be catching up payment of dues towards maintaining continuous membership. The advantage for keeping continuous membership is earning credit toward being able to claim Life Membership.

See you at the April meeting with your show & tell item.

Remember, this is YOUR club and IS what YOU make it. As always, I would like to know what you think about anything in this column or about the club in general.

Mark AB9CD

MAY MEETING IS ANNUAL MEETING

Per the bylaws our annual meeting in May is a special meeting for the purposes of holding elections. Expect additional special meeting business regarding changes to the bylaws.

MRAC Elections

As of April 21st we have two candidates that have accepted nomination to office: **Dave Shank, KC9WXN as director. Michael, KC9CMT as Secretary.**

The operation of our club is important business to those of us who are committed to our hobby. A club can not operate without a leadership structure. I urge all or any members that have an interest in the continued operation of their Amateur radio club to step forward and accept nomination to a director or club officer position.

We are in dire need of someone to run as president, Vice-president, Treasurer and position of Director.

Support you club and get involved in its month to month activities. It is more fun than work. It is always interesting to be one of the people in charge of things.

The nomination committee will be contacting the membership one more time before the May election to ask for volunteers for office.

Club Business & Amateur Radio Information

Silent Key Report

From the ARRL Section Monthly Newsletter.

**** Regretfully, I am informing you of the passing of these Wisconsin Amateurs:**

- Erwin Froehlich, W9RZW, 83. He was a member of NEWDXA.
- Edward Seruga, KE9JJ, 85. He was a member of Milwaukee Radio Amateur Club
- Robert Snyder, KB9CNT, 67.
- Verne Teske, W9RYA, 87. Verne was the founder of the Ozaukee County Amateur Radio Club, and he was the founder and president of the South Milwaukee Amateur Radio Club for the past 42 years. Verne was a member of the MRAC since 1963.
- Peter Ullrich, WA9CPN, 72. Peter was a member of the Ozaukee Radio Club.
- Walter "Bud" Durley, KC9LVV, 60. Bud was a member Hidden Valleys ARC.
- Charles Savard, N9WUN, 86.
- Allen Rothschild, W9WAQ, 74. Al was a charter member of the Watertown ARC.

FM Simplex Contest Wrap-Up

Thanks again to everyone who participated in the 2010 FM Simplex contest. Judging from the comments on the logs, everyone had a good time. The club station, W9RH was on the air again and quite active. Certificates are being mailed out to the winners. I look forward to having another great contest in 2011!

Joe, N9UX

The Certificate Winners Are:

1st Place Mobile - WB8BZK

1st Place HT - K9JK

1st Place Base - K9VS

1st Place 2m - NZ9I

1st Place 70cm - WB8BZK

1st Place 6m, 1.25m - (tie) WB8BZK, K9JK

Club Winner - Badger Contesters

Board of Director's Meeting Minutes

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Meeting called to order at 7:00 PM.

Present: Mark AB9CD, Dave DeFebo WB9BWP, AL, KC9IJJ, Michael KC9CMT. President declares that Board Meeting has a quorum, and can proceed.

Excused: Brian K9LCQ, Dave KA9WXN, Dwain KC9MJJ, Hal KB9OZN.

Secretary report read by Michael, KC9CMT. Motion to accept Board of Directors' Meeting Minutes as read. Motion made by Dave WB9BWP, Second by Al KC9IJJ,. Accepted by a vote of 4-0

Treasurer Report read by Mark, AB9CD. Donation made to Church for the year 2010. Club had \$14,338.42 balance in all accounts as of March. Club CD renews on Thursday, March 25, 2010. The new rate will be 1.85% on a two year CD with an option to withdraw part or all funds after one year. Updated treasurers' report to be uploaded to yahoo group. Motion made to accept treasurers' report as read made by Al KC9IJJ, Seconded by Dave WB9BWP. Motion to accept carried by voice vote of 4-0.

PRELIMINARY DISCUSSIONS:

Reported to club Board of Directors' that Verne Teske became a silent Key this morning. KB9PDF has paid dues for the next two years.

Repeater Report:

No new activities to report this period.

Old Business:

Club Officers: Club still in need of Treasurer. A change in by-laws pertaining to how officers are elected is under discussion.

Club DVD's: Historical Membership at 952 to date of most recent archival update. DVD project will include disks for sale at AES Superfest. Price will be \$10 to general public, \$5 to members or free to new members.

2011 SwapFest: Dave Shank, KA9WXN will head committee . Discussion tabled for this month.

Programs:

March: Log Book of the World Program.

April: Show & Tell Night. Fix ups Etc. Projects or New Purchases from the Membership.

May: Elections and the annual Auction. Hosted by Dave DeFebo.

June: Dave Shank will be back to discuss D-star from a users view-point.

July & August: No meetings Scheduled.

September—December: No programs scheduled yet.

Suggestions for new programs: Brian K9LCQ to discuss rockets & radio. Solar power backup & hybrid powered car technology discussion.

New Business:

FM Simplex Contest: Contest results to be available by Superfest. Submissions were due by March 21st.

Misc: Some QSL cards sent out by mark from last year's Field Day.

Swapfest table: Club will have a table at SuperFest again this year.

Election Nomination Committee: All officer positions are up for election this year, plus two Board of Director positions. April is traditionally the closeout of Nominations for the club election cycle. Nominees will be announced at the April Membership Meeting and published in the April and May Chatter. All members of the club have been polled twice on the subject of nominations

Volunteers: There is a great need to develop interest in Club positions and activities. Board may decide to drop the number of elected positions. Mark, AB9CD thought the renewal letters that were sent out to former members was well done, and has lead to a number of renewals. No restructuring of club officer positions will be done before the May election Meeting. Discussion has been tabled for this month.

Field Day: Still looking for Field day Captain. FD Captain will be given time at each club meeting to discuss and coordinate FD activities. Pioneer Village paid for year 2009.

Net Scheduling: Club needs to provide a preamble to guide net operations. This will take stress off of any net operators. Big need for club to have set standards for net procedures. Net Committees to be formed. Further work will be done on this project at the April Meeting.

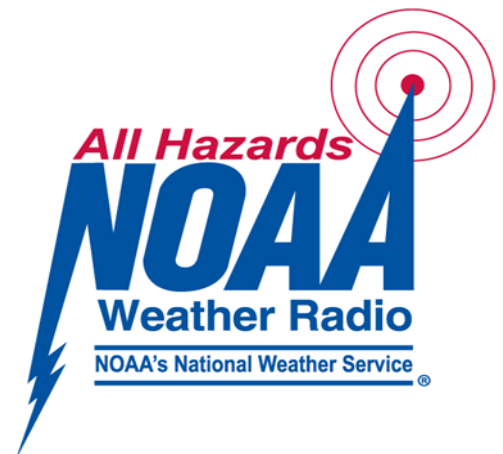
Swapfest Discussions: Outdoor fests are preferred due to state smoking regulations. Good revenue generating function for club. More discussion during next Board Meeting.

Motion to adjourn at 8:57 PM . Motion made by Michael KC9CMT, Second by Al, KC9IJJ. Passed 4-0.

Room returned to condition as found upon arrival.

Respectfully submitted,

Michael, KC9CMT



Membership Meeting Minutes

General Membership assembly called at 7:02pm.

Microphone passed along with attendance sheet for introductions @ 7:06pm. Staffing sheet for SuperFest also Passed around for volunteers.

Program for tonight was LOTW (Logbook Of the World) by Brian, K9WIS. LOTW was put together by ARRL to Facilitate confirmation of Radio Contacts for the purpose of ARRL Awards. It consists of a huge database of radio contacts submitted by members. LOTW can be setup to cover most QSO situations such as DX Contests etc..

All QSO records must be digitally signed using a digital Certificate obtained by ARRL. LOTW used TQSL software. TQSL is freeware, available under many different operating systems. Logging into LOTW to see current activity concerning your stations call sign is quite easy. A Certificate from ARRL is needed for each station location.

Our thanks to Brian, K9WIS for a very good program.

Membership Meeting: Called to order at 8:17pm.

Meeting minutes read into the record and a motion to accept the minutes as read was made by Dwain, KC9MJJ and Seconded by Jim, WB9RSK. Voice vote taken to accept without dissent.

Old Business

Treasurers' report read by Mark, AB9CD. Motion to accept as read by Joe, N9UX. Seconded by Michael, KC9CMT. Accepted by voice vote without dissent.

FCC sent back the club's call sign fee.

Donation made to Church for 2010 and Pioneer Village for 2009. Ozaukee County Historical society sent MRAC a thank you letter for our donation. This year is the 50th anniversary of the Ozaukee county historical society.

Recruitment letter to former members mentioned as being successful.

Starved Rock Radio Club sent letter along with donated tickets for their swapfest in June.

Ted, WA9RDI Wanted to know about the rain report. No progress to report on this idea.

No movement made on Lighthouse activation by Jerry, K9FI as of yet. Still need Volunteers for AES Table Staffing for Friday. Two silent keys were reported recently: Verne Teske, W9RYA and Ed Seruga, KE9JJ. President Mark, AB9CD talked briefly about each SK.

New Business

FM Simplex contest results to be at AES SuperFest. Joe may post result on the MRAC website. Chatter contest, three questions offered. Rookie roundup question answered correctly.

Club BOD is looking to start a Net committee along with a written preamble to take some pressure off of the current net operator, Poncho. Good progress being made in that direction.

Gordon West to appear at a MRC91 sponsored informal dinner at the Petra Restaurant. Gordon will talk at 7 or 8pm.

Motion made to adjourn meeting made by Dwain, KC9MJJ, Seconded by AL, KC9IJJ at 9:24pm. Motion passed by voice vote. Meeting room returned to good condition after adjournment.

Next Regular Meeting

The next meeting will be April 29th at 7:00PM. We meet in the Fellowship Hall of Redemption Lutheran Church, 4057 N Mayfair Road. Use the south entrance.

Please do not call the church for information!

Club Nets & Breakfast

Please check in to our nets on Friday evenings.

Our ten meter SSB net is at **8:30 p.m.** at **28.490 MHz USB.**

Our two meter FM net follows at 9:00 p.m. on our repeater at

145.390 MHz with a minus offset and a **PL of 127.3 Hz.**

Join us for Saturday morning breakfast at **Maxim's Restaurant, 18025 W. Capitol Dr.** We usually meet at around 8:00 a.m., and order around 8:15 a.m. The food and the company are good and;

You don't have to be a member of the club to join us!

Visit our website at: www.w9rh.org

Or phone (414) 332-MRAC or 332 - 6722

Chatter Deadline

The **DEADLINE** for items to be published in the **Chatter** is the 15th of each month. If you have anything (announcements, stories, articles, photos, projects) for the 'Chatter, please get it to me before then.

You may contact me or Submit articles and materials by e-mail at: Kc9cmt@earthlink.net

or by Post at:

Michael B. Harris

807 Nicholson RD

South Milwaukee, WI 53172-1447

**Club Repeater,
145.390Mhz Minus Offset
(127.3 PL)**

Experimenter's Bench

Analog Shunt-mode Solar Charge Controller

(C) G. Forrest Cook , March 23, 2010

<http://www.solorb.com/elect/>



Introduction

This circuit is an analog alternative to the switching [Shunt-mode Solar/Wind Charge Controller](#). It is one of the simplest ways to regulate the solar charging of a rechargeable battery, using about a dozen parts. Despite its simplicity, the circuit is relatively efficient. Unlike the switching shunt-mode controller, this circuit turns on gradually as the battery charges and diverts excess solar power into a load resistor in order to maintain a preset battery float voltage. It is limited to 500mA of solar charging current. Higher power systems will be better served with a [series switching charge controller](#). The circuit shown is set up to charge a 12V battery, it can be modified to support both lower and higher voltage battery systems by changing the value of the 39K resistor.

Specifications

Solar Panel Open Circuit Voltage: 18V (36 cells)
 Solar Panel Short Circuit Current: 0-500 mA max.
 Battery Voltage: 12V (nom.), can support other voltages with minor mods.
 Battery Capacity: 0.1 to 20 Amp Hours

Theory

Solar power is routed from the PV panel through the 1N5818 Schottky diode to the battery. As the charging battery's voltage rises, the TL431AC IC voltage rises up to the point of regulation. Above this point, the TIP30B transistor starts to conduct. The TIP30B connects the 22 ohm load resistor across the PV panel and diverts the excess charging current to the load in order to maintain a constant voltage across the PV panel. During regulation, part of the power is dissipated in the 22 ohm resistor and the rest is dissipated in the TIP30B transistor.

The 1N5818 diode allows PV charging current to flow into the battery during charging, but prevents a reverse current flow into the regulator circuit at night. The diode is a Schottky type which has a lower forward voltage drop (around 0.4V) compared to a regular silicon diode, this improves the efficiency of the circuit.

Construction

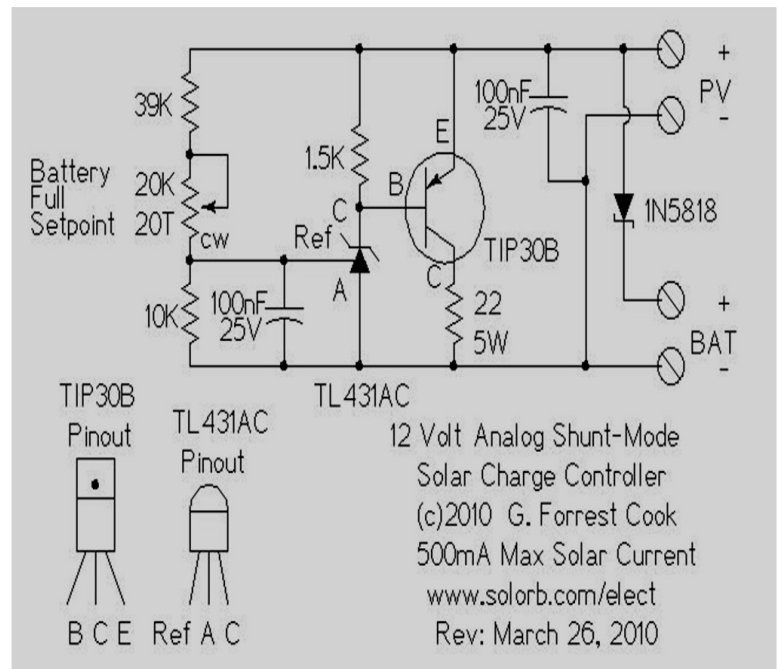
The circuitry was built in "dead bug style" on a blank piece of copper-clad printed circuit board as shown in the upper photograph. A four wire terminal block was screwed to the circuit board along with a medium sized TO220 heat sink. The TIP30B transistor was mounted to the heat sink using an electrically isolated heat transfer washer and a nylon shoulder washer. A suitably rated fuse should always be placed between the battery's positive terminal and the rest of the circuitry.

Alignment

Connect the PV panel to the PV inputs and a rechargeable 12V battery to the battery outputs. The battery should be pre-charged for easiest alignment. Point the panel at the sun, and monitor the battery voltage with a meter. Adjust the 20 turn 20K potentiometer until the battery reaches the desired float voltage. This is typically around 13.8V for gell-cell lead acid batteries.

Use

Place the PV panel in the sun, the battery will charge until it reaches the float voltage setting. When the battery reaches the float setting, the regulator circuit will dissipate all of the solar energy as heat. The heat sink and resistor get quite warm when running at the full 500mA solar current level.



The Author of this article has a web site where you can obtain kits and parts for Solar Projects':<http://www.cirkits.com/>

HAZARDS OF LONG-LIVED, CONVECTIVELY GENERATED HIGH WIND EVENTS IN THE UNITED STATES

Reprinted by Permission of author's: Walker S. Ashley and Thomas L. Mote

Convectively generated windstorms occur over a wide array of temporal and spatial scales (Fujita and Wakimoto 1981); however, the longer-lived, larger-scale, and most intense of these windstorms are termed "derechos" (Hinrichs 1888, Johns and Hirt 1987). Johns and Hirt (1987), Johns (1993), and Wakimoto (2001) have claimed that derechos account for much of the structural damage and casualties resulting from convectively induced non-tornadic winds. Yet, to date, no study has thoroughly examined the hazards (defined as any derecho that results in a human casualty or any amount of reported economic damage) associated with U.S. derechos. In order to illustrate the future risk and potential vulnerability of the U.S. population to these extreme windstorms, the following study reveals the hazards associated with derechos by examining casualty statistics and damage estimates of events that occurred during the 18-yr period 1986-2003.

There were 153 fatalities during the 18-yr period of record attributable to damaging straight-line winds from derechos (Table 1). The number of fatalities per year is highly variable – from 21 in 1998 to no fatalities in 1988. Examining the derecho fatalities spatially indicates an interesting distribution that does not necessarily correspond with derecho frequencies across the U.S (Fig. 1). Three northern states, Michigan, New York, and Ohio, contain nearly 37% of all derecho fatalities. This is somewhat counterintuitive as one would expect the highest fatality rates in regions with the greatest likelihood of derecho occurrences (i.e., across the south-central Great Plains or Midwest; see Bentley and Sparks (2003) and Coniglio et al. (2004)). Several possible explanations could account for this unusual distribution, including: 1) the tendency for more outdoor-related activities in state parks and wilderness areas of Michigan and New York; 2) boating activities along the Great Lakes; 3) the increased likelihood of particularly intense, warm-season derechos across the northern-tier of the U.S. (Coniglio and Stensrud 2004); 4) a heightened awareness of severe storms by people in the southern Great Plains states due to the high frequency of extreme thunderstorm-related perils in this region; and 5) the existence of better warning systems in the southern Great Plains. Thus, it is possible that there is some underlying integration of both physical and social vulnerabilities attributable to the observed derecho fatality distribution (Riebsame et al. 1986).

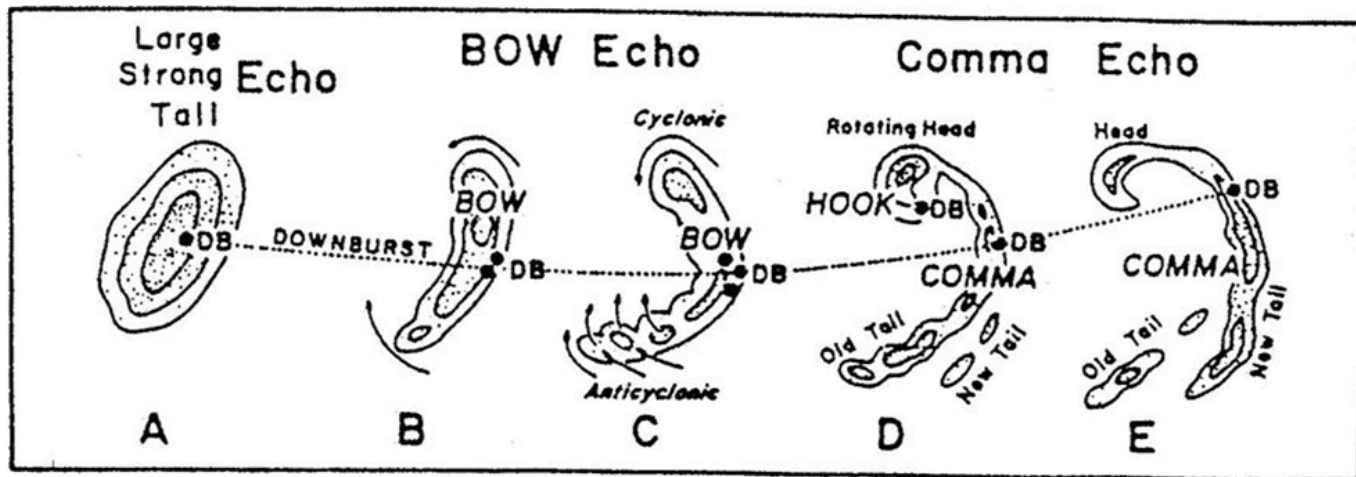
When examining derecho fatalities by type, boating and vehicular deaths accounted for nearly 50% of all fatalities. In the majority of cases, vehicular fatalities occurred in one of three ways: 1) overturned tractor semi-trailer; 2) felled tree landing on automobile; or 3) an automobile driven into a felled tree. Marine fatalities principally occurred as drownings when either sailing vessels or motorized boats were overturned due to high derecho winds.

On average, 145 injuries per year were attributable to derechos; however, annual values were highly variable with a maximum of 606 injuries occurring in 1998 and a minimum of 3 injuries occurring in 1988 (Table 1). In terms of spatial distribution (not shown), derecho injuries were clustered around several specific regions including 1) Lake Michigan; 2) the Interstate 95 corridor in the Northeast; 3) the Ohio River Valley; 4) the interior of the Southeast; and 4) the south-central Great Plains. Like fatalities, the higher frequency of injuries tends to occur outside of regions of the highest derecho frequency maxima. The states of Kentucky (333 injuries), Michigan (200), and Illinois (187) are highest in terms of derecho injuries.

Unlike fatalities, a considerable number of the injuries reported in *Storm Data* are not accompanied by a description of how the injuries occurred other than that they were caused by thunderstorm-related winds. In fact, nearly 40% of all derecho injuries reported in *Storm Data* have no description of injury type. The remaining 60% of injuries were classified according to how or where the injury occurred revealing a different distribution by type than derecho fatalities. Injuries in mobile homes (23% of classifiable injuries) and vehicles (21% of classifiable injuries) lead all other injury types by a considerable margin. Other high-frequency injury types (accounting for nearly 10% of classifiable injuries each) include camping, flying debris, permanent structures/homes, and temporary structures (i.e., recreational or special-event tents).

Forest Blowdowns

Not included in either PCS or *Storm Data* estimates is the impact derechos have on both private and public forests throughout the U.S. Several derechos have produced extensive forest blowdowns including the "Independence Day Downbursts" of 04 July 1977 (3440 km² of forest affected; see Fujita 1985), the two Minnesota derechos of 13 and 14 July 1995 (810 km² destroyed; *Storm Data* 1995), the "Adirondack" derecho of 15 July 1995 (3642 km² affected; 505 km² sustaining moderate to severe damage; *Storm Data* 1995), and the "Boundary Waters" derecho of 04 July 1999 (2691 km² affected; 1934 km² destroyed; Parke and Larson 2004, Price and Murphy 2003). The meteorological community often labels these blowdown events as Pakwashes after the Pakwash Provincial Forest in Northwest Ontario, Canada, that was impacted severely by a derecho that occurred on 18 July 1991. Derecho-produced blowdowns have altered forest landscapes and community dynamics by influencing tree mortality rates, reducing tree size and structure, decreasing forest diversity, and modifying species composition by advancing succession status (Peterson 2000).

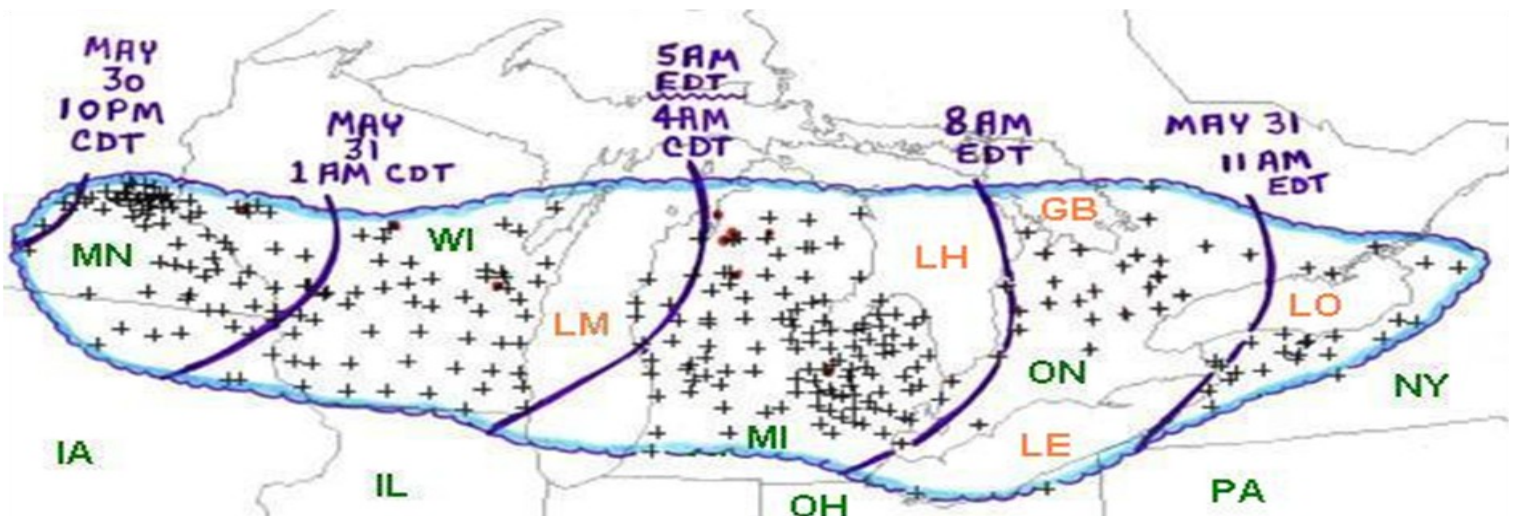


The evolution of the bow echo event. As seen many times on Wisconsin Radar

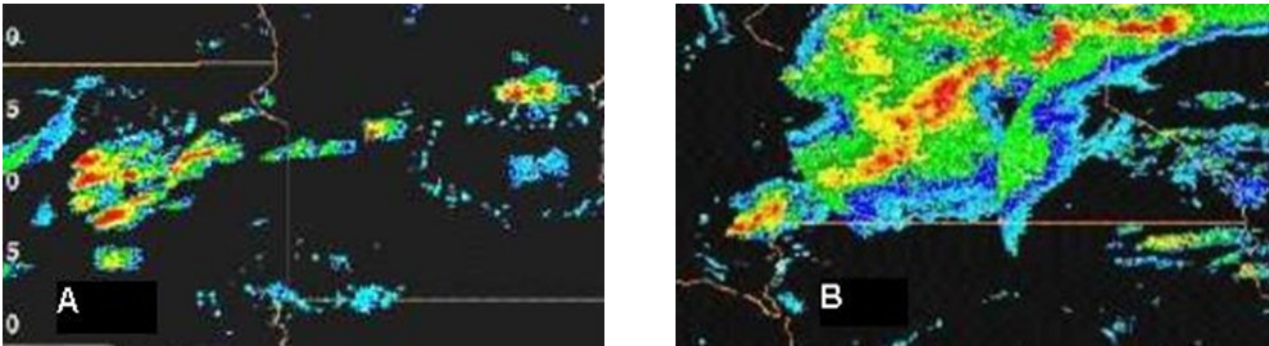
MAY 30-31, 1998 DERECHO

"The Southern Great Lakes Derecho of 1998"

Figure 1. Area affected by the May 30-31, 1998 derecho event (outlined in blue). Curved purple lines represent the approximate locations of the "gust front" at three hourly intervals. "+" symbols indicate the locations of wind damage or wind gusts above severe limits (measured or estimated at 58 mph or greater). Red dots and paths indicate tornado events.



On Saturday May 30, 1998 a low pressure system moving towards the northern Plains and Great Lakes region posed a threat for severe storms. By late Saturday afternoon supercell thunderstorms developed over eastern South Dakota and some began producing tornadoes. One violent tornado hit Spencer, South Dakota causing devastating damage and killing 6 people. However, this localized tornado outbreak in South Dakota would not be the only significant severe weather episode associated with this low pressure system. The storm system would also produce a major derecho event in the Upper Mississippi Valley and southern Great Lakes region during the evening and overnight hours of May 30th and May 31st (Fig. 1). And then, on Sunday May 31st, it would produce a third severe weather episode in the northeastern United States including strong tornadoes associated with supercells and damaging winds associated with bow echoes. The following paragraphs, images, and links focus on the second significant severe weather episode, the major derecho event shown in Fig. 1.



During the early evening hours on Saturday May 30, 1998, the tornado-producing supercells over eastern South Dakota (Fig. 2A) merged and became a squall line that moved eastward into southern Minnesota (Fig. 2B). As the squall line crossed southern Minnesota it evolved into a bow echo system which would expand in scale and race eastward across the southern Great Lakes region finally dissipating over central New York after sunrise on Sunday morning May 31st. This bow echo system would produce one of the most dangerous and costly derecho events in the history of the Great Lakes region. Thus, "The Southern Great Lakes Region Derecho of 1998" would prove to be a very scary weekend event for millions of people in the area. There would be many casualties and record amounts of damage.

..WISCONSIN...

The derecho was in full force as it entered west central Wisconsin just before midnight CDT. It raced across the southern two-thirds of the state at a speed near 60 mph reaching Lake Michigan in about 3 hours and exiting the southeastern corner of the state by 4 AM CDT on Sunday morning, May 31st.

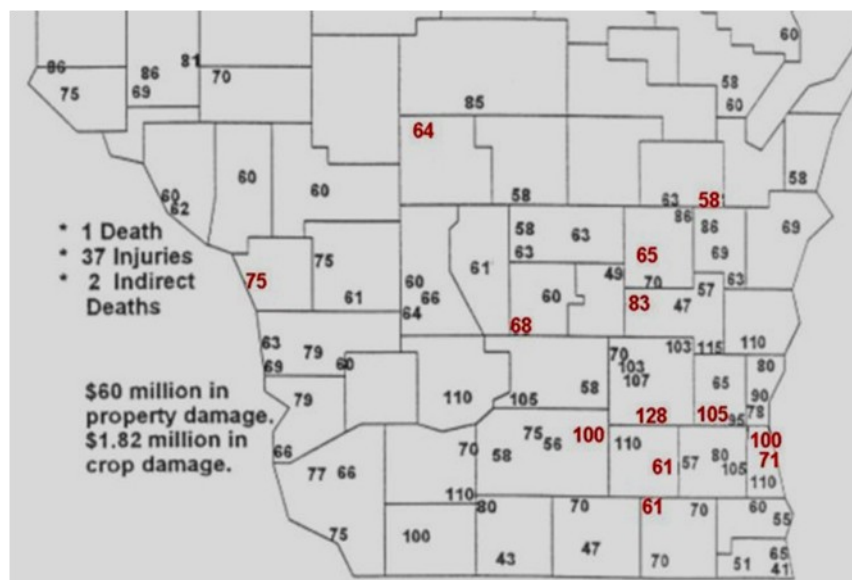


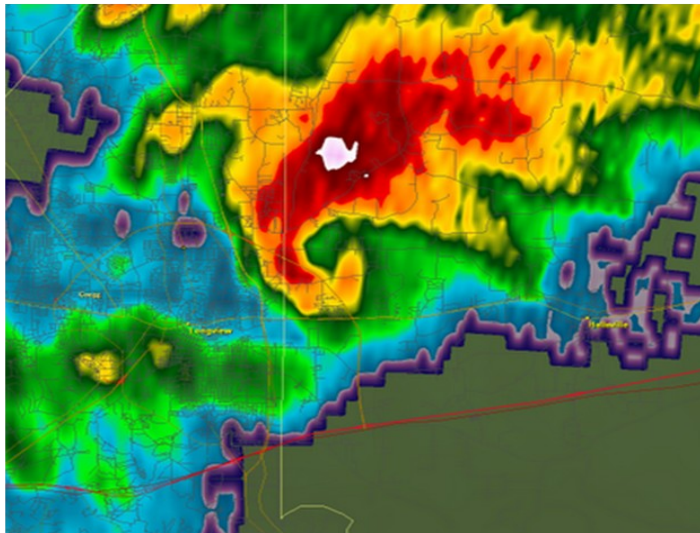
Figure 4. Maximum wind gusts in mph associated with the May 30-31 derecho in Wisconsin. Measured gust values are red and estimated gust values are black [Modified version of a map prepared by NWS Warning Coordination Meteorologists Rusty Kapela (Sullivan/Milwaukee, WI), Jeff Last (Green Bay, WI) and Todd Shea (LaCrosse, WI)].

Wisconsin Derecho Conclusion

As the derecho crossed central and southern Wisconsin almost every point experienced winds above severe limits (58 mph or greater) (Fig. 4). Measured and estimated wind gusts from 70 to 100 mph were common in the southern half of the state. Extremely strong measured winds gusts from 100 to 128 mph were recorded in a band from northeast of Madison to the northern part of the Milwaukee metropolitan area. The strong winds knocked down hundreds of power poles and thousands of trees. About 250,000 customers lost electrical power. Some residences and businesses remained without power for 5 or 6 days. Affected utilities companies and some emergency managers stated that this was the most damaging and widespread straight-line thunderstorm wind event to affect southern Wisconsin in the past 100 years! Over 5000 homes, businesses, and farm buildings were damaged and about two dozen homes and businesses were destroyed. Total damage estimates for Wisconsin exceeded 60 million in 1998 U.S. dollars. In Washington County a person was killed when a tree fell through the roof of her home and onto the bed where she was sleeping. Thirty seven other people were injured as the derecho roared through Wisconsin.

SUMMARY...

The "Southern Great Lakes Derecho of 1998" traveled 975 miles from southern Minnesota to north central New York in 15 hours with an average speed of 65 mph! It became one of the most damaging North American derecho events in history, destroying over 400 homes and businesses and damaging almost 20,000 others. Total damage estimates were close to 300 million in 1998 U.S. dollars. Almost 2 million customers were left without power, some for many days. For some electrical power companies in Wisconsin and Lower Michigan this event was the most damaging weather event in their history. Six people were killed and over 200 were injured during this major derecho event on that last fateful weekend in May of 1998.



A hook echo is a display of radar reflectivity. It is a signature produced by precipitation held aloft that wraps around the mid-level mesocyclone. Since the mesocyclone has counterclockwise winds, the reflectivity signature of a hook echo will have a cyclonically shaped hook. The area free from reflectivity inside the hook is the up-draft and inflow notch region of the supercell. A hook echo is one clue to a radar operator that a supercell has a potential of producing a tornado. Many of the violent tornadoes associated with classic supercells will show a distinct hook echo.

FM SIMPLEX CONTEST CLONED

We received the email printed below following the first New Providence ARC version of our FM Simplex contest. Our contact with NPARC began in 2008 when we sent a certificate to "2 land" when Barry K2JV encouraged their younger members to contest and submit a log to the MRAC. We couldn't resist acknowledging the submission from so far away from "younger" hams (age 12 if memory serves correctly). We sent a certificate for best score in the 2 call area. The kids got a big kick out of getting the certificate. This led K2JV to develop and run their own contest this year. What follows is a summary of their first event.

Hi Mark and Hi to all members of MRAC:

The members and officers of the New Providence (NJ) ARC thank you for your initiative in starting an FM Sprint Contest on VHF and UHF. We did indeed run our version of your contest in tandem with yours on February 21st. It was really the first year for us. The rules we used were essentially the same as yours, and the times and frequencies were exactly like yours. I may change the frequencies a little next year since we had a lot of adjacent channel QRM especially on 2 meters.

Unfortunately there was no opening on 6 meters, and I did have a couple of the guys monitoring for Midwest stations.

We ended up with about 25 different stations (call signs) logged of which 14 submitted logs to me. All the stations which submitted a log rec'd a Certificate, one of which is enclosed so you can see it. We only had one entrant in the HT category, and he was not one of our kids. So he got "First Place" in the HT category, HI!!

There were only two of us on 220 MHz, and I'll work on that for next year. As you know there are very few rigs available for 220. There are a couple of low power HTs available however and I have discovered that a simple modification to a Radio Shack or a Mirage brick will make it work as an amplifier on 220 to get up to 30 watts on FM. I will document this modification soon.

I did some advertising in local bulletins and our ARRL Hudson Division newsletter, plus a lot of direct e-mail. I was amazed that no one worked out of our primary grid square FN20. Even New York City and Long Island (easily reachable on FM simplex) is in FN21 and Northernmost New Jersey is in FN30. I don't know where these guys were during the contest, but we'll work on them for next year.

If anyone in MRAC is interested, we do a lot of things like your contest. Look in April CQ Magazine for an article about us operating from the Great Swamp National Wildlife Refuge.

73 es CUL de Barry K2JV

WISCONSIN Monthly ARES Section News**** Wisconsin VHF/UHF County Hunters Award**

I'm Todd KC9BQA in Sheboygan County. For years, I've been an energetic promoter of more activity on VHF/UHF in and near Wisconsin. I'd like to introduce an exciting new program to you. We've created an award for working WI counties on 50 MHz and higher, and we want you to get involved, as well as spread the word to all corners of Wisconsin.

Please visit www.wivuch.com. WIVUCH stands for Wisconsin VHF/UHF County Hunters. This website has all the rules, along with WI county maps, plus downloadable entry forms for you to start keeping track of your contacts.

You will earn an initial certificate for working just 20 of the 72 WI counties. Rovers or hill toppers will earn a certificate for activating 10 WI counties. A handsome plaque will be awarded for hams who work or activate all 72 WI counties over time. Again, details are at www.wivuch.com.

Newer hams or casual V/UHF'ers are encouraged to get on board. All are welcome. Please spread the word to hams with VHF/UHF gear or interest. Us VHF/UHF'ers hope to make many new friends on the air as we work toward the award. The more participation, the more fun we all have. I am eager to award dozens or hundreds of certificates, so get on board.

Who will earn the first certificates?? If you have questions or comments, or if you want to get on our database of interested operators, please email me -- sprinkies@excel.net

NEW DUES POLICY

Dues paid after May 1st will be assessed a \$3 late payment fee making dues a total of \$20 per year. Avoid the extra cost and pay your dues before May 1st. The purpose of this policy is to prevent delaying the election and auction at the May meeting with last minute payments to qualify for voting in the annual election.

Testing & Local Swapfests

VE Testing

Next VE Testing on May 29th at:

Amateur Electronic Supply 5720 W. Good Hope Rd. Milwaukee, WI 53223

Swapfests

Ozaukee Radio Club SwapFest

May 1st, 2010, 32nd Annual Swapfest

<http://www.ozaukeeradioclub.org>

Talk-In: 146.970 (PL 127.3)

Cedarburg, WI
Circle-B Recreation Center ,6261 Highway 60

Phone: 262-242-1029 or 800-698-6087 (for tickets)

Email: tnawrot@wi.rr.com

Saturday, July 10, 2010 --- 6:00AM

South Milwaukee Amateur Radio Club SWAPFEST!

American Legion Post #434
9327 S. Shepard Ave
Oak Creek, Wi. 53154
Tickets: \$5.00
Food & Beverages available after 6:00AM

Working Committees

Field Day

- Open

FM Simplex Contest

- Joe – N9UX
- Jeff-K9VS
- Dave-WA9WXN
- Brian-K9LCQ
- Sherm-KB9Q
- Mark-AB9CD

Ticket drum and drawing

- Tom – N9UFJ
- Jackie – No Call

Newsletter Editor

- Michael-KC9CMT

Webmaster

- Joe Schwartz—N9UX

Refreshments

- Michael – KC9CMT



Membership Information

The Hamateur Chatter is the newsletter of MRAC (Milwaukee Radio Amateurs' Club), a not for profit organization for the advancement of amateur radio and the maintenance of fraternalism and a high standard of conduct. MRAC Membership dues are \$17.00 per year and run on a calendar year starting January 1st. MRAC general membership meetings are normally held at 7:00PM the last Thursday of the month except for November when Thanksgiving falls on the last Thursday when the meeting moves forward 1 week to the 3rd Thursday and December, when the Christmas dinner takes the place of a regular meeting. Club Contact Information Our website address <http://www.w9rh.org>

Telephone (414) 332-MRAC (6722)

Address correspondence to:

MRAC PO Box 070695,

Milwaukee WI 53207-0695.

Email may be sent to

w9rh@arrr.net

Our YAHOO newsgroup:

<http://groups.yahoo.com/group/MRAC-W9RH/>

CLUB NETS:

- Our Six Meter SSB net is Thursday at 8:00PM on 50.160 MHz USB
- Our Ten Meter SSB net is Friday at 8:00PM on 28.490 MHz \pm 5 KHz USB.
- Our Two Meter FM net follows the Ten meter net at 9:00PM on our repeater at 145.390MHz - offset (PL 127.3)

Milwaukee Area Nets

Mon.8:00 PM 3.994 Tech Net

Thur. 8:00 PM 50.160, 6 mtr SSB Net

Mon.8:00 PM 146.865- ARES Walworth ARRL News Line

Thur. 9:00 PM 146.910 Computer Net

Mon.8:00 PM 146.445 Emergency Net

Fri. 8:30 PM 28.490 MRAC W9RH 10 mtr Net SSB

Mon.8:00 PM 146.865- ARES Net Walworth

Fri. 9:00 PM 145.390 W9RH 2 mtr. FM Net

Mon.8:45 PM 147.165- ARRL voice news (ARES)

Sat. 9:00 PM 146.910 Saturday Night Fun Net

Mon.9:00 PM 50.160 6 mtr .SSB NET

Sun 8:30 AM 3.985 QCWA (Chapter. 55) SSB Net

Mon.9:00 PM 147.165- ARES Net Waukesha-Milwaukee

Sun 9:00 AM 145.565 X-Country Simplex Group

Tue.9:00 AM 50.160 6 . Mtr 2nd Shifter's Net

Sun.10:00 AM 443.800+ FM-38 link to 146.88 Baraboo SWAP Net

Tue. 7:00 PM 145.130 MAARS Trivia Net

Sun 9:00 PM 146.910 Swap Net

Tue. 8:00 PM 7.035 A.F.A.R. (CW)

Sun 8:00 PM 146.910 Information Net

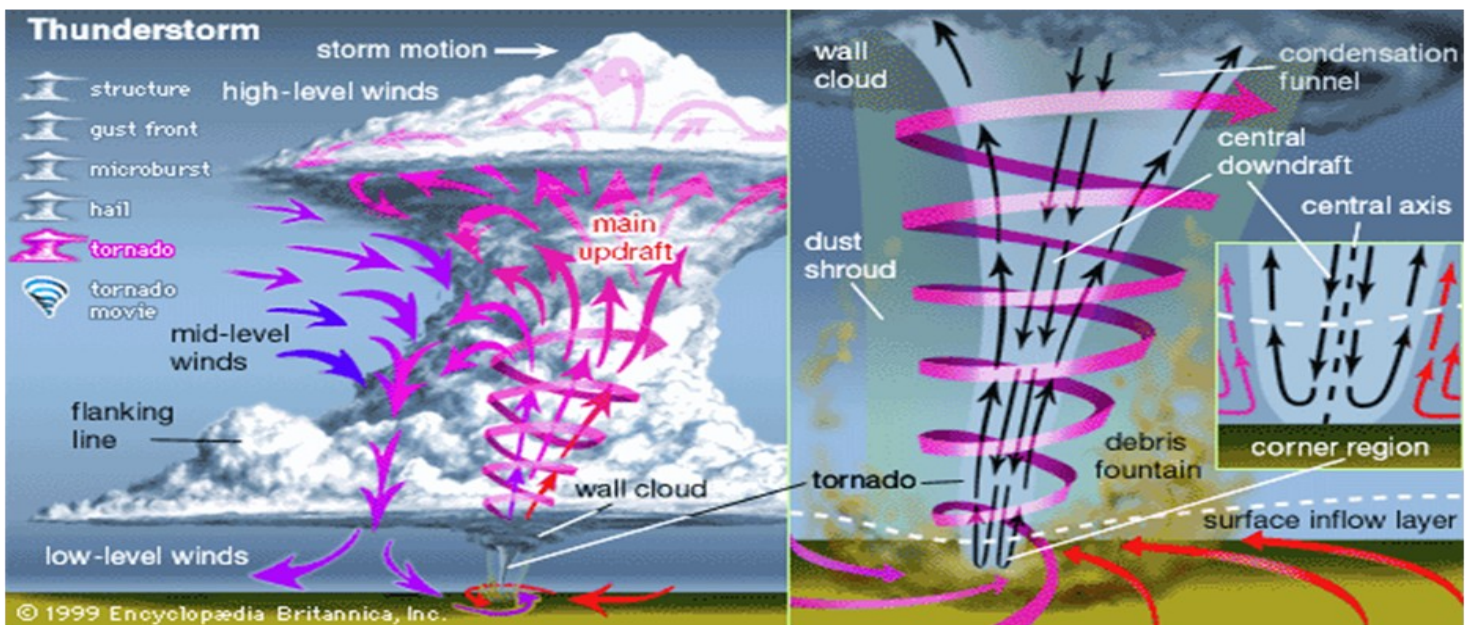
Wed. 8:00 PM 145.130 MAARS Amateur Radio Newsline

Sun.8:00 PM 28.365 10/10 International (Milwaukee Ch.) (SSB)

Wed. 9:00 PM 145.130 MAARS IRLP SwapNet

2 meter repeaters are offset by 600KHz - - 70 centimeter repeaters are offset by 5 MHz

SSB frequencies below 20 meters are LSB and for 20 mtrs and above are USB.



Classic Tornadoic storm configuration